

ARTICLE 5

GRADING STANDARDS

Sections:

- 5.01 Land Disturbance Standards Purpose and Intent**
- 5.02 Subdivision Grading Standards**
- 5.03 Cut and Fill Standards**
- 5.04 Hillside Disturbance**
- 5.05 Washes/Drainage**
- 5.06 Retaining Walls**
- 5.07 Walls and Fences**
- 5.08 Local Streets**
- 5.09 On-Site Street Name Signs (Public Streets)**

Fountain Hills Subdivision Ordinance
ARTICLE 5

Section 5.01 Land Disturbance Standards Purpose and Intent

The principal purpose of these Land Disturbance Standards is to allow the reasonable use and development of land while promoting the public health, safety, convenience and general welfare of the citizens of the Town. These standards are to help maintain the character, identity, and image of the Town. The primary objectives of the Land Disturbance Standards are: to minimize the possible loss of life and property through the careful regulation of development; to protect watershed, natural waterways; to ensure that all new development is free from adverse drainage conditions; to protect against soil erosion; to minimize land disturbance and encourage preservation of the natural character and aesthetic value of the desert within the Town and preserve the general visual character of graded sites by allowing the flexibility necessary to produce unique, environmentally sensitive projects; and to provide for the protection of the existing landscape by encouraging retention of natural topographic features, native vegetation, and wildlife habitat.

To meet these objectives, it is necessary during planning and implementation of grading activities to give consideration to the following: conservation of the natural environmental function of the site; compatibility with the surrounding land; stabilization of hillsides, slopes, or other areas subject to erosion or mass movement; and the preservation of the natural capacity of drainage courses and protection of natural drainage ways.

It is the intent of these requirements to provide specific land disturbance standards for the development of land within the Town. Standard Town requirements for subdivision design, storm water retention and detention, rights-of-way, pavement widths and street design shall apply, except where alternatives may be permitted to maintain the natural desert character of the area.

Section 5.02 Subdivision Grading Standards

- A. Grading Permits:** Prior to the issuance of a zoning clearance or a grading permit, no person shall cause or permit any clearing or grading on, or to, any site other than soil tests conducted on a parcel of land 100 square feet maximum in size. Any brushing, clearing, or grading in all zoning districts, on any vacant lots, or on developed lots in non-disturbance areas as set forth in this Article or Hillside Protection Easements, shall require a grading permit and shall be preapproved by the Fire Marshal or authorized representative. In no case shall any brushing, clearing, or grading extend further than a defensible space which shall be defined as, and shall be limited to, a band of land

Fountain Hills Subdivision Ordinance
ARTICLE 5

measured horizontally up to a maximum of 30 feet from any structure. Any cacti, shrub or plant in the defensible space shall not be removed unless identified as dead by the Fire Marshal.

Dead trees in the defensible space shall be removed. Live vegetation beneath trees within the defensible space shall not be removed, but should be maintained at a height that will deter its functioning as a "ladder" for fire to travel from the ground vegetation into the tree crown. Live vegetation within the defensible space shall have all dead material removed and should be thinned and pruned to reduce fire intensity and rate of spread. Owners of vacant lots shall provide a defensible space from an adjoining property owner's structure per written recommendations determined from an on-site inspection from the Fire Marshall or authorized designee. Any clearing for a defensible space that extends into a non-disturbance area or into a Hillside Protection Easement area is prohibited without prior written authorization from the Fire Marshal or authorized designee after an on-site inspection of the area. Any clearing of a vacant lot is prohibited unless the clearing is for a defensible space to an adjoining structure as outlined previously in this subsection. Elimination of wildlife habitat for protected species is prohibited. A person found guilty of violating the provisions of this Subsection 5.02.A shall be subject to the penalties established in Subsection 5.02.B.11.d of this article.

B. Grading Standards:

- 1. Grading of Non Single-Family and Non-Duplex Zoned Platted Land that is Located in Plats Where Applications Were Made and Accepted Prior to November 3, 1996:** On platted land where the plat application was made and accepted by the Town or Maricopa County before November 3, 1996 the area permitted to be disturbed on any non single-family and non-duplex zoned platted land is unlimited on terrain sloping less than 15%. Disturbance on slopes equal to or exceeding 15% is limited to the percentage equivalent to the "lot coverage percentage" prescribed in the applicable zoning district.
- 2. Grading of Single-Family Residential and Duplex Zoned Platted Land that is Located in Plats Where Applications Were Made and Accepted Prior to November 3, 1996:** In all single-family and duplex Residential Zoning Districts the extent of disturbance on platted land where the plat application was made and accepted by the Town or Maricopa County before November 3,

Fountain Hills Subdivision Ordinance
ARTICLE 5

1996, shall be limited to the following (lots used for governmental purposes and owned by utility companies that are regulated by the Arizona Corporation Commission and owned by other political subdivisions of the State are exempt from the lot disturbance limitations of this subsection):

- a.** Four times the size of the footprint of the house or building, (including the pad for the house or building). "Footprint" means that area of the house or building measured from the outside walls (excluding any overhanging portions) which includes indoor uses such as attached garage, carport, utility room, laundry, etc. (including covered patios and breezeways which are an integral part of the roof structure of the house or building). A 20 foot wide band of primary driveway access is excluded from the land disturbance area limitations. If a residual area remains after computing the allowed area of disturbance of a lot or parcel, and any of the following conditions apply, the Community Development Director or designee, may allow the property owner to disturb all or a portion of residual area:

 - 1. The residual area of the lot or parcel was previously permitted to be disturbed during subdivision construction.
 - 2. There are no significant areas of native vegetation to be preserved.
 - 3. There are no rock outcrops, significant topographic features or significant native vegetation to be preserved.
 - 4. All adjacent property owners were permitted to disturb property adjacent to the residual area.

There shall be no waiver by the Community Development Director or designee, for disturbance of residual area that:

- 1. Contains rock outcrops, significant topographical features, significant native vegetation, or;

Fountain Hills Subdivision Ordinance

ARTICLE 5

- [illegible]

Fountain Hills Subdivision Ordinance
ARTICLE 5

5. **Grading for Non-Residential Structures:** The limitations on grading area for non-residential structures in residential zoning districts as specified in Subsections 5.02.B.2 through 5.02.B.4 of this Article, may be waived by the Town Council.
6. **Grading for Parks and Golf Courses:** The limitations on disturbance as specified in this Article (including area of disturbance as well as height and retention of cut and fill) may be waived by the Town Council for the development of a park, a golf course, trails or other recreational development that does not entail a building or buildings as the primary purpose of the development that does not entail a building or buildings as the primary purpose of the development.
7. **Grading for Utility Lines:** Utility lines, including water and sewer lines and laterals, must be placed within the allowed disturbance area and all disturbed lands shall be restored to the original grade and re-vegetated with vegetation indigenous to the site. With the exception of power lines capable of carrying 69kv or more of voltage, utility lines shall be located underground. Utilities located in subdivisions platted later November 3, 1996. Must be located within allowed disturbance areas as outlined in Subsection 5.04.B.1.b of this Article. Lots or parcels owned by utility companies which are regulated by the Arizona Corporation Commission are only exempted from the hillside disturbance regulations of this Ordinance if the development of the lot or parcel is solely for utility-related uses.
8. **Road Grading:** Grading for roads is subject to the cut and fill limitations of this Article. These limitations may be waived by the Town Council.
9. **Total Disturbance:** All grading, including subdivision improvement grading, and/or disturbance performed subsequent to September 20, 1991 is considered to be cumulative under this Article.
10. **Disturbance Limit Fencing:** Prior to the issuance of a building or grading permit, and prior to any disturbance activities, a six foot high imbedded chain-link fence shall be installed on the disturbance limit line as identified on the approved site plan for the site. The disturbance limit boundary shall be established and staked by an Arizona-registered and surveyor. No disturbance limit fencing shall be located outside of the surveyor's staked area.

Fountain Hills Subdivision Ordinance
ARTICLE 5

Appropriate warning signs in English and Spanish shall also be posted at least 100 linear feet on the required fencing. The Chief Building Official, or his/her designee(s), shall inspect the fence, signage, and surveyor's staking to insure its proper location and construction prior to the issuance of the building/grading permit for the site. Such fencing and signage shall be maintained in place throughout the grading/construction process and shall only be removed after a final inspection or Certificate of Occupancy has been issued by the Town. These regulations may be waived by the Community Development Director or designee if 100% of the lot, on which the construction activity is permitted, has been graded or disturbed as part of an approved subdivision grading permit.

11. Disturbance Buffers:

- a.** It is recommended that all proposed non-disturbance areas or Hillside Protection Easements be located not closer than:
 - 1.** Eight feet from any building.
 - 2.** Five feet from the outside face of any retaining wall where the retaining wall is supporting a fill slope.
 - 3.** One foot from the "day lighted" top of a maximum one to one cut slope, the toe of such slope beginning at the bottom of the outside edge of the footing for any retaining wall where the retaining wall is supporting a cut slope.
 - 4.** Three feet from the outside face of any other wall or fence or the edge of any fill grading.
 - 5.** One foot from the edge of any cut grading.
 - 6.** Ten feet from any sewer lateral, or five feet from the edge of any utility line trench, whichever is greater.
- b.** If disturbance does take place within a non-disturbance area or within a Hillside Protection Easement, all construction and grading activity on the site shall stop, pursuant to a Town-issued stop work order. The stop work order shall remain effective until the property owner and the property owner's authorized representatives, either jointly or severally does all of the following:

Fountain Hills Subdivision Ordinance
ARTICLE 5

1. Provides the Town with a revised site plan prepared by an Arizona-registered land surveyor that accurately depicts the area and size, in square feet, of the disturbance into the non-disturbance area(s) or Hillside Protection Easement area(s).
 2. Provides the Town with re-vegetation and irrigation plans prepared by an Arizona-registered landscape architect for the non-disturbance or Hillside Protection Easement area(s) disturbed.
 3. Causes the non-disturbance area(s) or Hillside Protection Easement Area(s) to be re-vegetated and irrigated according to the submitted and approved re-vegetation and irrigation plans.
 4. Pays to the Town a fee, in an amount determined by the Town Manager or designee, per square foot of disturbance that occurred within the non-disturbance areas or Hillside Protection Easements on the property.
- 12. Columbaria Disturbance Exemptions by Special Use Permit:** The development of columbaria, including any accompanying features such as walkways, may be exempted from the regulations of this Subsection 5.02.B by Special Use Permit pursuant to Section 2.02 of the Town Zoning Ordinance if all of the following conditions exist:
- a. The columbaria is an accessory use to a church.
 - b. The columbaria and any accompanying features shall be designed to minimally alter the existing topography and vegetation.
 - c. The columbaria and any accompanying features shall be designed so that any Natural Features are not disturbed.
 - d. The building area of the columbaria shall not exceed 10% of the total building area of the church buildings.

Fountain Hills Subdivision Ordinance
ARTICLE 5

- e. A landscape plan prepared and stamped by an Arizona-registered landscaping architect, which plan meets the applicable landscaping regulations of Article VI, Section 6.05 of this Ordinance, is submitted and approved by the Community Development Director or designee.
- 13. Pad Elevation and Building Location Certifications:** Prior to the approval of any building stem wall inspection or a pre-slab inspection, whichever occurs first, the property owner or his/her designee shall provide the Town with a certification statement that is prepared, stamped and signed by an Arizona-registered land surveyor, that certifies the finished floor elevation(s) and the horizontal location of the building. Pad elevations and building locations must be accurate to 1/10th of a foot as compared to the approved site plan or an amended site plan. The requirements in this subsection may be waived at the discretion of the Town Engineer.
- 14. Stabilization of Slopes:** Slope stabilization is required as set forth in the International Building Code, Chapter 18 and Appendix J.
- 15. Pre-Grading:** A grading or building permit shall not be conditioned on altering, modifying or not utilizing existing grading, if the existing grading work was completed in conformance with valid permits, and does not present a threat or danger to the proposed development or neighboring properties. This provision does not prevent the Town Engineer from requiring necessary documentation of site suitability to assure soil stability, compaction, and other geotechnical purposes.
- 16. Restoration of Graded Surfaces:**
- a. Vegetation shall be reestablished on all exposed fill slopes, cut slopes, utility lines, driveway(s) and graded surfaces, except for cosmetic landscaping abutting buildings in accordance with the standards established in Article VI of this Ordinance. Newly exposed rock faces shall be stained.
 - b. This re-vegetation process shall be completed prior to the final approval by the Community Development Director or designee, unless a specific exemption is granted by the Community Development Director or designee. Grading and

Fountain Hills Subdivision Ordinance
ARTICLE 5

other improvements for drainage and erosion control purposes shall also be completed and revegetated/landscaped prior to final inspection.

- 17. Dust Control:** During all grading, and until re-vegetation or site restoration is completed, dust should be minimized by application of approved dust control methods.

Section 5.03 Cut and Fill Standards

- A. Importation of Fill Material:** Except as exempted in the adopted International Building Code, the importation of fill material to a subdivision is prohibited unless a grading permit allowing such fill is first secured.
- B. Exportation of Excavated Material:** Prior to the exportation of any material from a site, a proper location for such material must be identified in order to secure a grading permit to remove such material. The material shall only be exported to an approved site, as shown on the approved grading plans. Alternate receiving sites for exported material shall only be utilized if the grading plan is resubmitted to the Town and the amended grading plan is approved.
- C. Height of Un-Retained Cut or Fill:** If the natural grade or the subdivision finished grade if the property was subdivided or re-subdivided after September 20, 1991, is less than a 15% percent gradient, the maximum amount of un-retained fill or cut shall be 4 feet above/below the natural grade, or subdivision grade. Where the natural grade or the subdivision finished grade if the property was subdivided or re-subdivided after September 20, 1991 has a gradient of 15 % or more, the maximum amount of un-retained fill or cut shall be 6 feet above/below the natural grade or the subdivision finished grade. Any fill or cut grading in excess of these amounts must be contained by retaining walls.
- D. Limitations on Cut and Fill:** Except as provided in Subsection 5.03.E below, the height of any fill or the depth of any cut area, including grading for the construction of public or private streets, as measured from natural grade, shall not be greater than ten feet regardless of whether the fill or cut is retained, un-retained, or a combination thereof. Except as provided in Subsections 5.03.E and 5.03.F below, the total combined height of any fill or the depth of any cut area as a result of subdivision improvement grading and/or any subsequent grading,

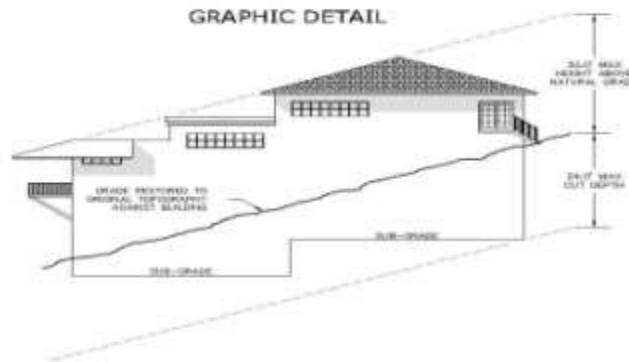
Fountain Hills Subdivision Ordinance
ARTICLE 5

including but not limited to grading approved as a part of building permit approval, shall not total more than ten feet, as measured from natural grade, unless otherwise provided in this Article. These limitations on cut and fill apply to all zoning districts. These limitations may be waived by the Town Council and in the case of unexposed basement cuts, may be approved by the Zoning Administrator as provided in Subsection 5.03.F below.

- E. Additional Limitations on Cut and Fill:** In addition to the foregoing, in Single-Family Residential Zoning Districts, an area not to exceed 5% of the footprint of the main structure on the lot will be exempt from cut and fill limitations if the exempted area is completely concealed beneath the footprint of the main structure and as otherwise permitted in this section. The footprint shall be defined as any portion of the main structure under roof. All separate small areas beneath the main structure shall be aggregated into one computation not to exceed the 5% exemption. Any exterior wall or retaining wall adjacent to the exempted cut or fill area shall conform to the height limitation of the zoning district. No exemption from the maximum ten foot limitation will be allowed in any zoning district for cut or fill areas located in any setback, yard or non-disturbance area, and no exemption can be used to obtain greater building or wall height than allowed in the zoning district. No exemptions from the maximum ten foot limitation shall be allowed for accessory structures or guesthouse structures. No grading for cut or fill shall alter the natural drainage pattern and water volume exiting the property as determined and approved by the Town Engineer.
- F. Unexposed Basement Cuts:** The Zoning Administrator may approve unexposed basement cuts exceeding the maximum ten foot depth if all of the criteria are met:
- 1.** The building site shall not be graded so as to create a flat, visible pad surrounding the main residential structure.
 - 2.** All portions of the cut in excess of ten feet shall be completely concealed from view and retained by building walls, or retaining walls in the case of light wells.
 - 3.** Natural grade shall be reestablished in accordance with the "Building Height" definition of Section 1.12 of the Town Zoning Ordinance.

Fountain Hills Subdivision Ordinance
ARTICLE 5

4. The total depth of cut shall not exceed 24 feet at any point (refer to detail below).



- G. **Maximum Slope of Fill Grading:** Any un-retained fill slope, if allowed, shall have a minimum three feet horizontal to every one foot vertical fill. The maximum slope of fill grading for roadway construction shall be at the discretion of the Town Engineer.
- H. **Maximum Slope of Cut Grading:** Maximum steepness of exposed cut slopes is dependent on the stability of the material excavated, and shall be as prescribed by the Town Engineer. However, exposed cut slopes adjacent to side and rear property lines may be no steeper than three feet horizontal for every one foot vertical.
- I. **Blending of Fill Grading:** Fill grading shall have an irregular and contoured edge that blends into the natural surrounding terrain.

Section 5.04 Hillside Disturbance

- A. **Purpose; Methodology.** The purpose of these hillside regulations is to limit the amount of hillside disturbance within each subdivision. The amount of hillside area that may be disturbed shall be based on the severity of the slope. Hillside areas shall mean any area having slopes equal to or greater than 10%, as measured from a topographical contour map prepared and stamped by an Arizona-registered land surveyor. The

Fountain Hills Subdivision Ordinance
ARTICLE 5

Town requires the submission of topographic contour maps having contour intervals not greater than two feet and at a scale not smaller than 1" = 20' for sites less than 10 acres. Sites 10 to 100 acres may utilize contour intervals not greater than five feet at a scale not smaller than 1" = 50'. Sites over 100 acres may utilize contour intervals not greater than five feet at a scale not smaller than 1"=100'. Individual non-contiguous areas of hillside or non-hillside that are less than 500 square feet that are located within larger areas non-hillside or hillside, respectively, may be included with the larger area of non-hillside or hillside that surrounds it. Whether a subdivider chooses the Lot-by-Lot Hillside Protection Option or the Hillside Transfer and Protection Option, as set forth in Subsections 5.04.G.1 and 5.01.G.2, respectively, the actual square footage of disturbance permitted within one slope interval may be transferred into areas having lesser degree of slope. The percent of slope shall be determined by the spacing between the contours lines as shown on the preliminary plat. Following are the land disturbance allowance of slope interval areas of 500 square feet or more:

Percent of Slope	Preservation Requirement (%)	Disturbance Allowance (%)
<10	0	100
10 - <20	70	30
20 - <30	80	20
30 and more	90	10

B. Exemption; Calculations. Except as otherwise specifically provided for in this Ordinance, there are no exempted disturbance activities. When permitted, exempted disturbance activities shall be subtracted from the gross area of the subdivision, and the required "Preservation Requirement" and "Disturbance Allowance" areas, as noted above in Subsection 5.04.A, shall be calculated from the net area of the subdivision (that area remaining after the area(s) of exempted disturbance have been subtracted from the gross area of the subdivision).

1. Limited Exemptions: The following disturbance activities are exempted only from horizontal Hillside Disturbance Regulations contained in this Section 5.04.

Fountain Hills Subdivision Ordinance
ARTICLE 5

- a.** Disturbance within street rights-of-way, tracts of land for private roads meeting public road standards, and any roadway grading required by the Town Engineer outside of street rights-of-way or tracts for private roads meeting public road standards.
- b.** Utility lines, or any other public improvement activities needed for the development of utility lines and associated equipment, outside of any disturbance caused by other development activities, either pre-existing or current, may be exempted from the requirements of this section upon administrative review by the Community Development Director or designee and approval of a "Utility Disturbance Permit" by the Town Council. Utility Disturbance Permits shall only be issued in conformance with the Following conditions.
 - 1.** The Community Development Director or designee shall find that the proposed disturbance is necessary.
 - 2.** The Community Development Director or designee shall approve a re-vegetation and landscaping plan which shall be completed within a specified time frame and made a condition of the Utility Disturbance Permit.
 - 3.** The Community Development Director or designee shall determine the method, if any, of covering open trenches during non-working hours.
 - 4.** The Community Development Director or designee shall specify the expiration date of the Utility Disturbance Permit.
 - 5.** Utility Disturbance Permits are project-specific and property-specific and are non-transferable.
 - 6.** The Community Development Director or designee may, at his sole discretion, include any other reasonable condition he feels is necessary to ensure public safety and convenience.
 - 7.** Any violations of the conditions of a Utility Disturbance Permit shall render the permit void.

Fountain Hills Subdivision Ordinance
ARTICLE 5

- 2. Specified Non-exempt Activities:** The following disturbance activities are specifically not exempted from the Hillside Disturbance Regulations contained in this Section 5.04:
- a.** Disturbance activities for the development of any effluent watering field or any lake or pond intended for the storage of treated effluent, or any service and/or access road or any above or below ground pipeline or utility lines, whether or not the development of such fields, ponds, lakes, service/access roads, pipelines or utility lines have been mandated or suggested by another governmental agency or Court.
 - b.** Any "utility" disturbance, other than for a utility line and associated equipment as described above in Subsection 5.04.B.1.b.
- 3.** In addition to the detailed information that is required to be provided to the Town to ensure compliance with this Article, as noted in Subsection 2.03.D.9 of this Ordinance, the property owner may submit to the Town an alternative method of calculating the "Preservation Requirement" and the "Disturbance Allowance" as set forth in Subsection 5.04.A. The Town Council may approve this alternative method of calculating the "Preservation Requirement" and the "Disturbance Allowance" at the time of preliminary plat consideration.
- C. Previously Disturbed Areas.** Any previously-disturbed hillside areas within a proposed subdivision, including but not limited to disturbance for purposes as described in Subsection 6.06.C of this Ordinance, shall be counted toward the total amount of hillside disturbance within the subdivision and shall not be accepted by the Town as undisturbed hillside areas. If an applicant desires to salvage landscape materials for re-vegetation purposes prior to Final Plat approval, the applicant may do so at the risk of non-compliance with this Ordinance and denial of the final plat.
- D. Determination of Natural Grade.** The topography of land within the Town as of September 20, 1991 is considered to be natural grade by this Ordinance. Grading and/or other disturbance activities conducted since September 20, 1991 shall not be exempted from the hillside disturbance regulations of this Ordinance and cumulative hillside disturbance shall be

Fountain Hills Subdivision Ordinance
ARTICLE 5

offset at the time of subdivision approval pursuant to the regulations of this Section 5.04.

E. Disturbance Buffers and Fencing.

- 1. Fencing:** Except as provided in Subsection 5.04.E.2, after a disturbance area is defined, an area at least equal to the hillside protection requirements of the lot, parcel, or tract, shall be protected by chain-linked fence six feet in height and affixed in the ground to assure non-movement. The fenced-in area shall include all previously disturbed areas and all areas intended to be disturbed. There shall be no disturbance outside the fenced area. However, the Community Development Director or designee may approve the re-vegetation of nondisturbance areas or hillside protection areas disturbed prior to September 21, 1991 in accordance with a landscape plan approved by the Community Development Director or designee. The fencing may be removed only after the completion of all construction activity on the lot.
- 2. No-Fencing:** Where the Department determines, in its sole discretion, that fencing as required by Subsection 5.04.E.1 would be impracticable, the Department may waive the fencing requirements of Subsection 5.04.E.1, and in such case, the area to be disturbed shall include a perimeter area of not less than 20 feet in width around all other construction or grading activities. The proposed disturbance perimeter, as shown on the approved set of grading plans, shall be iron-staked by an Arizona-registered land surveyor or Arizona-registered civil engineer, roped, and warning signs posted prior to any disturbance activity on the lot or parcel. This staking, roping and warning signage shall be inspected by the Town Engineer prior to any disturbance activity on the lot or parcel. The staking, roping and warning signage shall be maintained in the same location during all subdivision construction activities, and shall not be removed until final approval has been given by the Town, and in the case of the construction of a multi-family development, until the Town has issued a Certificate of Occupancy.

F. Utility Disturbance. Disturbance activities for utility line (including but not limited to water and sewer mains and laterals) installation shall include an area on center with the utility line at a width (may vary) necessary for such utility work. No disturbance activities are permitted outside of the area indicated to be disturbed.

Fountain Hills Subdivision Ordinance
ARTICLE 5

G. Subdivider Options. In order to comply with the Land Disturbance Regulations of this Section 5.04, the subdivider of a subdivision wherein future disturbance activities will take place can choose either of the following two options:

- 1. Lot-by-Lot Hillside Protection Option:** If the subdivider does not desire to utilize the Hillside Transfer and Protection Option set forth in Subsection 5.04.G.2 below to comply with the regulations of this Section 5.04, and no hillside protection measures are proposed (other than those measures required in Subsection 5.4.C above) in the platting process for the undisturbed, yet developable lots or parcels within the subdivision, each lot or parcel shall be required to individually meet the land disturbance requirements in this Article.
- 2. Hillside Transfer and Protection Option:**
 - a.** If the subdivider chooses to transfer allowable hillside disturbance from undisturbed hillside areas to lots, parcels, tracts or rights-of-way in a subdivision, the subdivider may do so by identifying an area acceptable to the Town and granting to the Town a Hillside Protection Easement(s). If the Hillside Transfer and Protection Option is utilized, all areas located outside of the Hillside Protection Easement(s) within the subdivision may be disturbed through the subdivision improvement process and/or through future development activity.
 - b.** If the Hillside Transfer and Protection Option is chosen by the subdivider to preserve the required amount of hillside areas within the subdivision, the following regulations shall apply:
 - 1.** If a subdivision is located in two or more zoning districts, the amount of hillside slopes required to be preserved within each zoning district shall be calculated separately.

Fountain Hills Subdivision Ordinance
ARTICLE 5

2. The total amount of required undisturbed hillside areas for the subdivision can be preserved anywhere within the subdivision. Hillside Protection Easements can be placed on lots intended to be developed, instead of, or in addition to, tracts of land within the subdivision boundaries. In some Town-approved instances, hillside areas may be preserved outside of the subdivision boundaries.
3. The following Hillside Protection Easement text shall be used for easements intended to meet the intent of this Section 5.04:

Owner hereby grants to the Town of Fountain Hills a perpetual easement upon, across, over and under all those areas designated as "Hillside Protection Easement" for the purpose of preserving the natural topography and vegetation of land area within the Final Plat of (Subdivision Name) in conformance with the Article V of the Town of Fountain Hills Subdivision Regulations. The owner or any of his heirs, successors, or assigns shall not perform nor allow to be performed, any construction; or cutting, filling, grading to the Topography; nor any grubbing, brushing, removal, or otherwise damage any vegetation, rock outcropping, or other natural feature in the Hillside Protection Easement area without prior Town Council approval. A trail way may be a permitted use if approved by the Town Council.

- H. Enforcement; Remediation.** In the case of disturbance activities in violation of this ordinance, the Community Development Director or designee has the authority to enforce these regulations, including but not limited to, the authority to require the immediate chain –link fencing of all disturbance perimeters, the authority to require the immediate re-vegetation of any illegally-disturbed areas and/or the authority to issue project-wide stop work orders. Furthermore, disturbance activities in violation of this Ordinance are violations of the Fountain Hills Town Code, and are subject to **ARTICLE 1-8 PENALTY**, Subsection A of the Town Code, as amended.

Fountain Hills Subdivision Ordinance
ARTICLE 5

ILLUSTRATION OF PRESERVATION REQUIREMENT

The following is an illustration of the correct method to calculate the "Preservation Requirement" and "Disturbance Allowance" for Happy Acres, a fictional, 100-acre subdivision, having 25 acres in each percentage slope band, with 10 acres "exempted" for roadway construction. The ten acres of "exempted" disturbance activities are allocated evenly across the four percentage slope bands. The following table provides the only acceptable methodology to calculate "Preservation Requirement" and "Disturbance Allowance" under the Hillside Transfer and Protection Option, as described in Subsections 5.04.A and 5.04.G.2 above:

HAPPY ACRES SUBDIVISION

	Notes:	0-10%	10-20%	20-30%	30%+	Total
A	Total Land Area (In Acres)	25.00	25.00	25.00	25.00	100.00
B	Exempt Areas (In Acres)	2.50	2.50	2.50	2.50	10.00
C	Residual (Net) Total	22.50	22.50	22.50	22.50	90.00
D	Disturbance Allowance %	100.00	30.00	20.00	10.00	--
E	Maximum Disturbance Allowance in Acres	22.50	6.75	4.50	2.25	36.00
F	Preservation Requirement %	0	70.00	80.00	90.00	--
G	Minimum Preservation Requirement in Acres	0	15.75	18.00	20.25	54.00
H	Proposed Disturbance in Acres	15.00	7.00	4.00	4.00	30.00
I	Excess (Short)	N/A	(0.25)	0.50	(1.75)	--
J	Internal Hillside Transfers	N/A	0.25	(0.25)	0	--
K	Required Size of Outside Sending Area	N/A	0	0	17.5	--

Explanation of Notes for Happy Acres Illustration:

- A.** The total gross subdivision size for the Happy Acres Subdivision is 100 acres.
- B.** The total "exempt" areas for the subdivision total 10.0 acres.

Fountain Hills Subdivision Ordinance

ARTICLE 5

- C.** Residual or "net" areas in the subdivision are derived by subtracting "Exempt Areas" from "Total Land Area", in each slope category. These net totals, in each slope category, are used to calculate Maximum Disturbance Allowance and Minimum Preservation Requirement in each slope category.
- D.** The maximum disturbance percentage in each slope category.
- E.** Derived by multiplying "Residual (Net) Total" by "Disturbance Allowance percentage."
- F.** The minimum percentage preservation requirement in each slope category.
- G.** Derived by multiplying "Residual (Net) Total" by "Preservation Requirement percentage."
- H.** The developer of the Happy Acres Subdivision proposes to disturb, through the development of the subdivision, an amount of non-"exempted" land in each slope category, in an amount noted on the table.
- I.** Derived by subtracting "Proposed Disturbance in Acres" from "Maximum Disturbance Allowance in Acres." A (Short) in this row indicates that the proposed subdivision will disturb more land in that slope category than is permitted. Excess may only be transferred from a steeper slope category. In this case the subdivider can transfer an excess in the 20-30% slope category to compensate for the shortage in the 10-20% slope category. In the case of the "short" in the 30%+ slope category, the subdivider may either reduce the amount of disturbed land in that slope category or seek Town Council approval of a hillside transfer from outside the subdivision.
- J.** If the subdivider chooses the Hillside Transfer and Protection Option, hillside transfers from a steeper slope category to a lesser slope category are permitted within the subdivision. In this illustration, the subdivider has transferred .25 acres of the .5 acre excess in the 20-30% slope category to compensate for the .25 acres of non-permitted disturbance in the 10-20% slope category.
- K.** Derived by dividing any (short) acreage, after any internal hillside transfers, by the Disturbance Allowance percentage. If the subdivider did not desire to preserve the required amount of land in that slope category within the subdivision, and the Town Council approved of a hillside transfer from outside of the subdivision, this is the amount of land within that slope category, or a steeper slope category, that would need to be preserved within the "outside sending area" or the area outside of the subdivision from which the hillside transfer was originating. The required ratio for transfers from an outside area is 10:1 (the amount of outside area preserved must be ten times the size of the area within the subdivision).

Section 5.05 Washes/Drainage

- A. Maintenance of Continuity.** The entrance and exit points and continuity of all natural drainage channels on a lot or parcel shall be preserved. Ponding of water shall not be permitted above cut or fill slopes. Building sites must be designed to carry surface waters away from buildings and away from or through retaining walls.

Fountain Hills Subdivision Ordinance
ARTICLE 5

- B. Swale Grading.** The minimum amount of swale grading necessary for drainage purposes is not subject to the restoration procedures of Subsection 5.02.B.16.
- C. Character.** Retained washes and new drainage channels shall be given a “natural” desert character where possible in accordance with the Town’s engineering requirements. Requirements may include landscaping with rock and native plant materials, and preservation of existing natural features (see Exhibit 26).
- D. Detention Basins.** Storm water detention basins with natural materials are encouraged subject to the conditions and locations as approved by the Town Engineer.
- E. Detention Basin Re-vegetation/Aesthetics.** Storm water detention basins shall be re-vegetated with existing vegetation and native plant materials where appropriate in accordance with the approved landscape plan. Terracing, berming and contouring will be encouraged to naturalize and enhance the aesthetics of the basin and to blend with the surrounding terrain.
- F. Basin Construction.** Basins shall be designed to allow for the creation of peninsulas, more “natural” contouring, and the placement of boulders and rock outcroppings (See Exhibit 27).
- G. Basin Slopes.** Basin slopes shall not exceed a three to one (horizontal to vertical) slope adjacent to public streets. Remaining slopes shall also not exceed a three to one slope. Deviations may be approved by the Town Engineer if the lesser slope creates excessive grading of the existing desert environment (See Exhibit 27).
- H. Native Materials.** The use of native materials in the construction of headwalls, flow retardant structures and devices, culverts and drainage channel bottoms is encouraged (See Exhibits 28 and 29).
- I. Erosion Prevention.** Erosion controls should be constructed and maintained to prevent erosion of all slopes and graded areas. Surface drainage interceptors may be provided at the top of all cut and fill slopes where surface runoff will create erosion problems. Sub-surface drainage facilities may be required for stability and protection of affected areas due to ground water seepage. Erosion protection of drainage swales will be encouraged through the use of native rocks and native plant materials. Where runoff velocities necessitate additional erosion

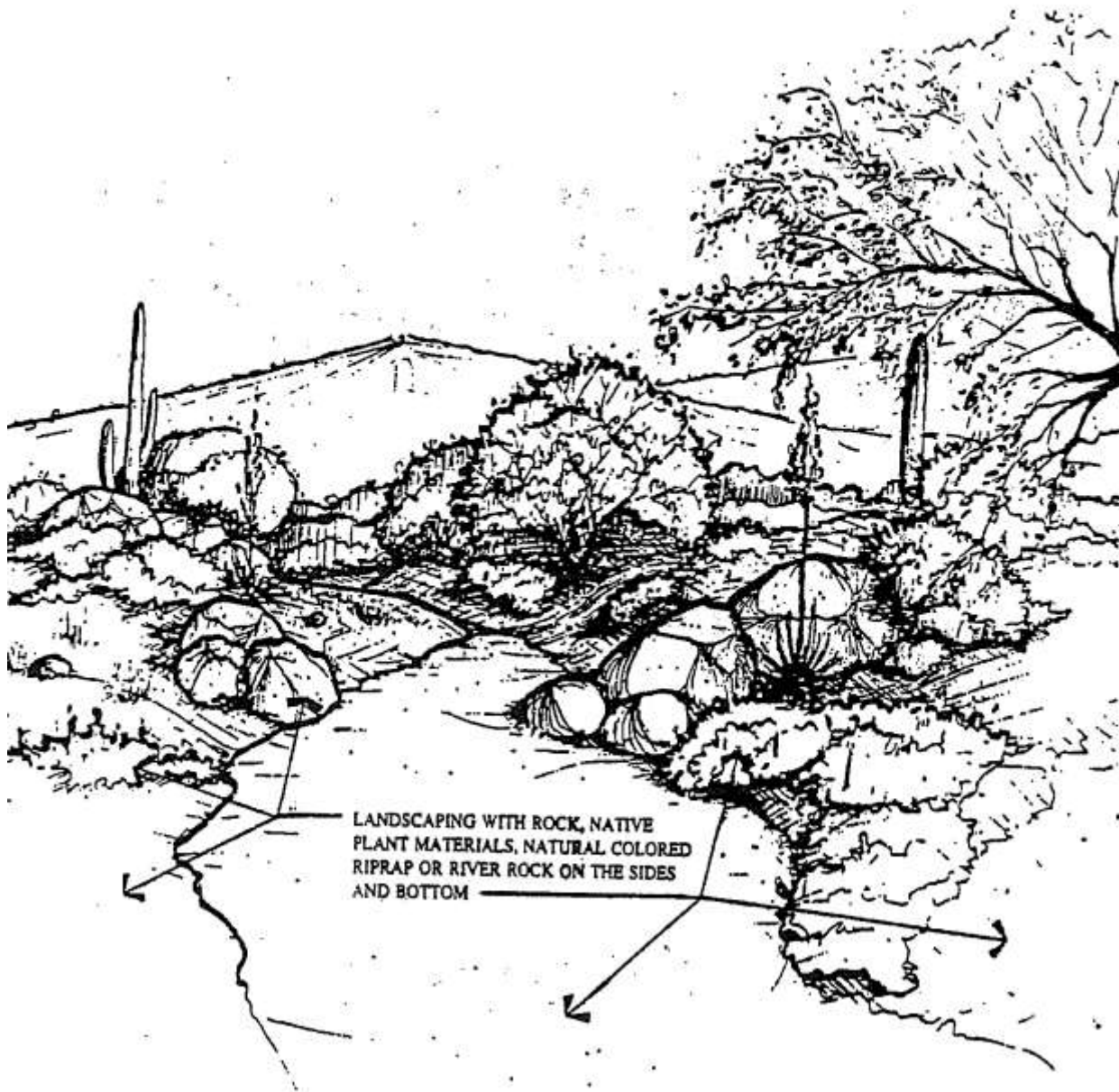
Fountain Hills Subdivision Ordinance
ARTICLE 5

protection, the use of integral colored gunite or alternative material may be approved by the Town Council with a recommendation by the Town Engineer and Community Development Director or designee.

Fountain Hills Subdivision Ordinance
ARTICLE 5

Exhibit 26

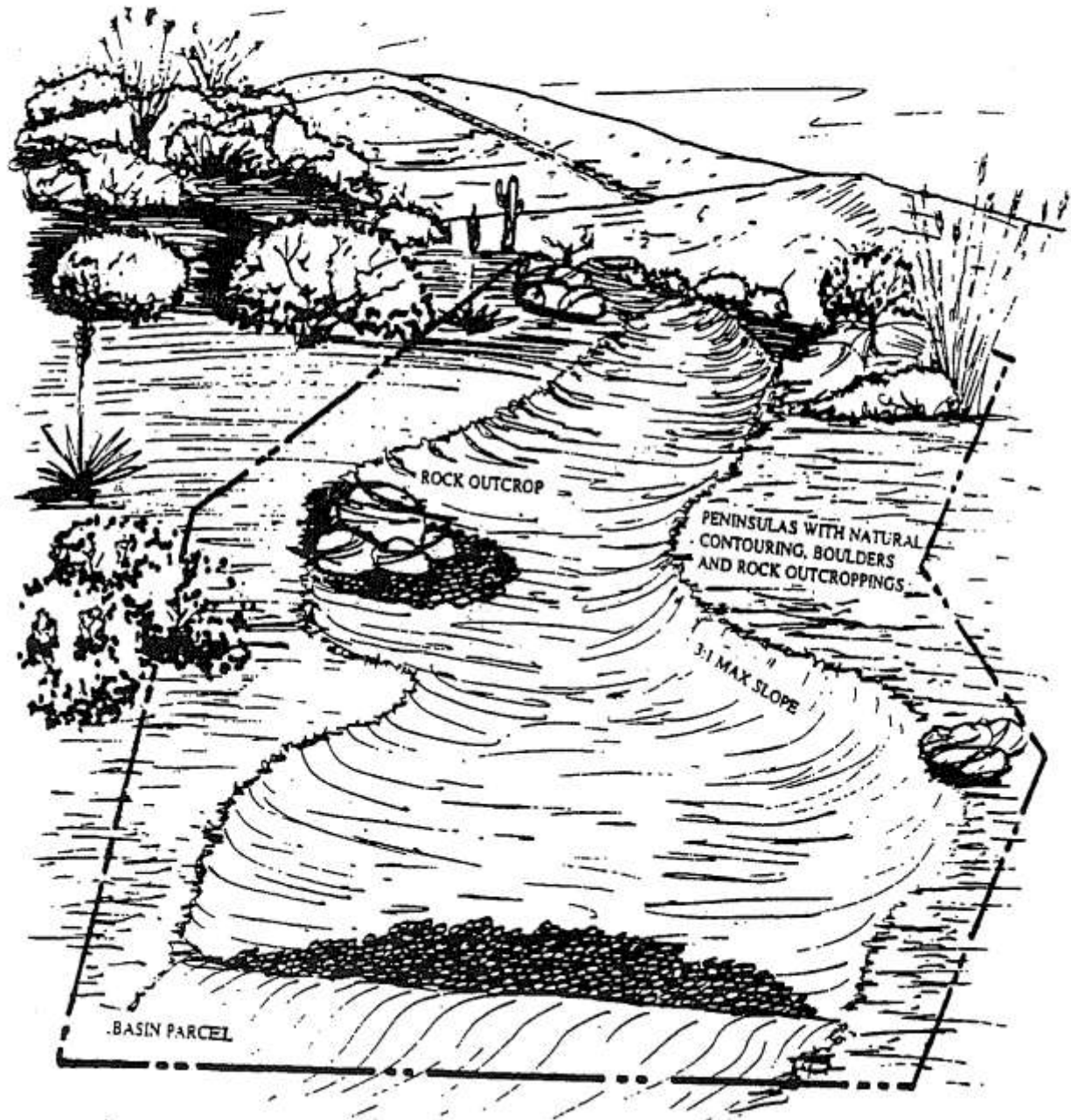
NATURAL DESERT CHARACTER
FOR DRAINAGE CHANNELS



Fountain Hills Subdivision Ordinance
ARTICLE 5

Exhibit 27

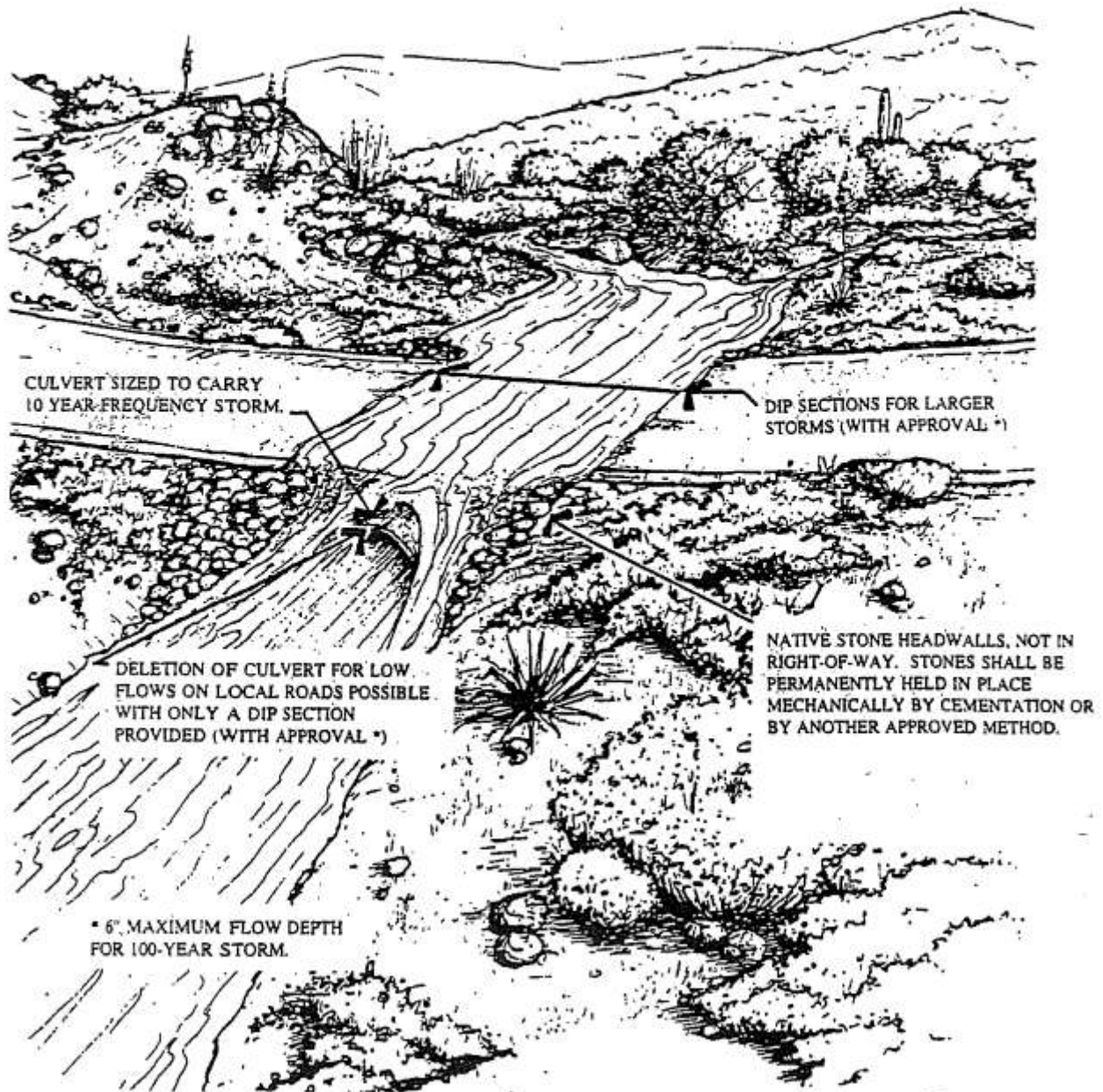
BASIN CONSTRUCTION AND SLOPES



Fountain Hills Subdivision Ordinance
ARTICLE 5

Exhibit 28

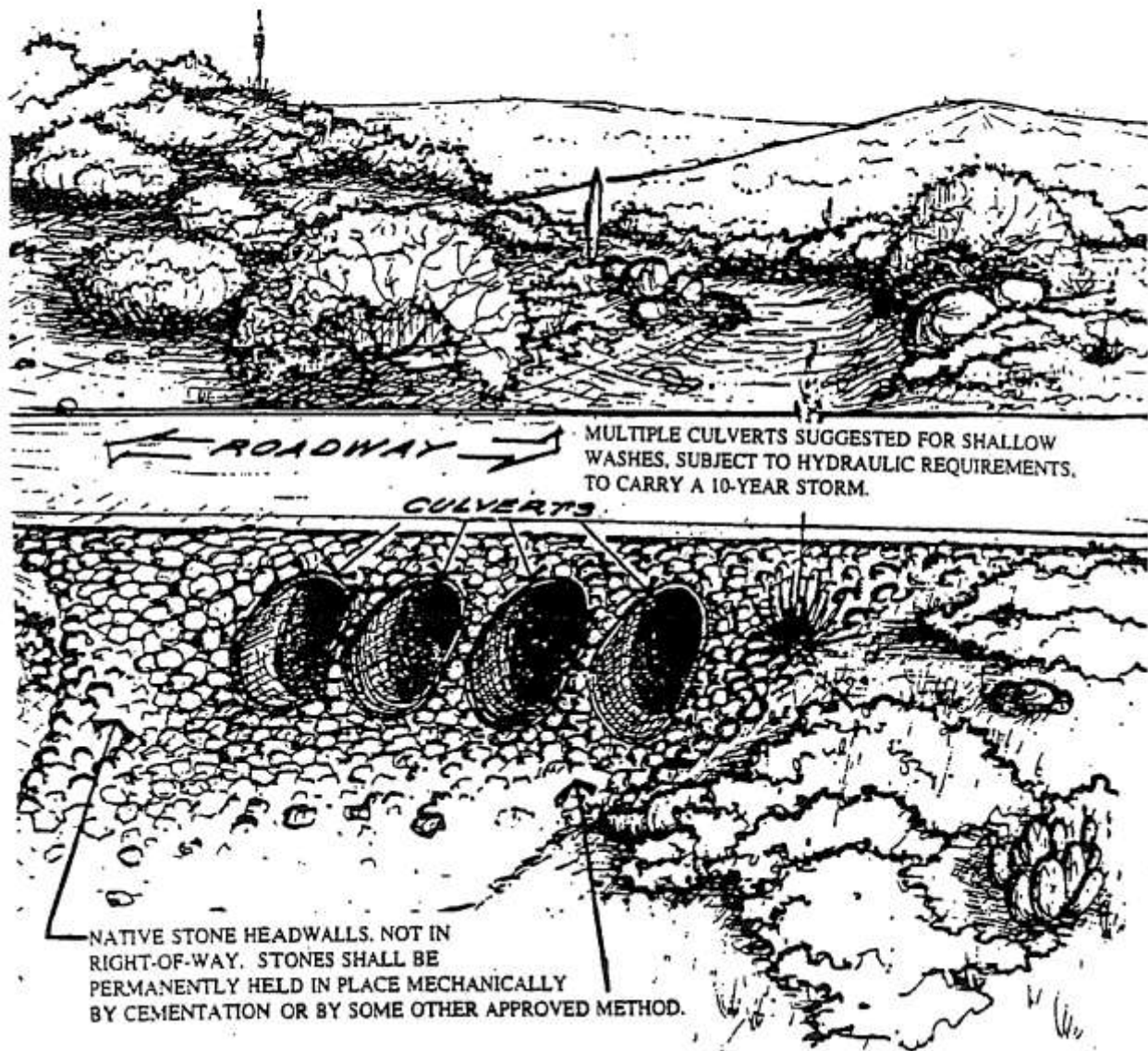
DRAINAGEWAY CROSSING
CULVERT AND DIP SECTION



Fountain Hills Subdivision Ordinance
ARTICLE 5

Exhibit 29

**MULTIPLE CULVERTS
FOR LARGER DRAINAGEWAYS**



Fountain Hills Subdivision Ordinance
ARTICLE 5

Section 5.06 Retaining Walls.

- A. Measurement of Height:** The height of a retaining wall is measured from the low side of the natural grade, or the subdivision finished grade if the property was subdivided or re-subdivided after September 20, 1991, to the top of the wall, whether or not the top is retaining earth. Freestanding fences with at least 50% openness on top of retaining walls are not included in retaining wall height restrictions but are restricted by the fence height regulations of the Town Zoning Ordinance. Any freestanding fence with less than 50% openness and located on or within a horizontal distance less than the average height of the retaining wall shall be included in the retaining wall height. If the face of a building is within 15 feet of a retaining wall, the height of the retaining wall shall be included in the building height calculation and the combination of the retaining wall height and the building height shall not exceed the maximum building height limitation
- B. Terraced Walls:** Any terraced retaining wall and freestanding fence with less than 50% openness within the average height of the highest wall on the same property shall be calculated as one height and be subject to the retaining wall height limitations of Subsection 5.07.A of this Ordinance. If two retaining walls, and freestanding fences with 50% openness or greater openness, are separated by a landscaped terrace of a width at least the height of the highest wall, then each wall and/or fence shall be considered as a separate wall or fence (See Exhibit 30).
- C. Determination of Average Height.** The average height of a retaining wall shall be computed by taking the total vertical surface of the wall (or straight-line or circular sections of a meandering wall), above grade and dividing it by its length.
- D. Height Limitations.** The maximum height and average height of a retaining wall, or straight-line or circular sections of a meandering wall, shall not exceed the following:

AVERAGE SLOPE AT WALL LOCATION *-%	0-15	>15
Maximum Height (feet)	8	10
Average Height (feet)	6	7

* ***As determined by averaging percentage of slopes shown on sections through grading plan submittal.***

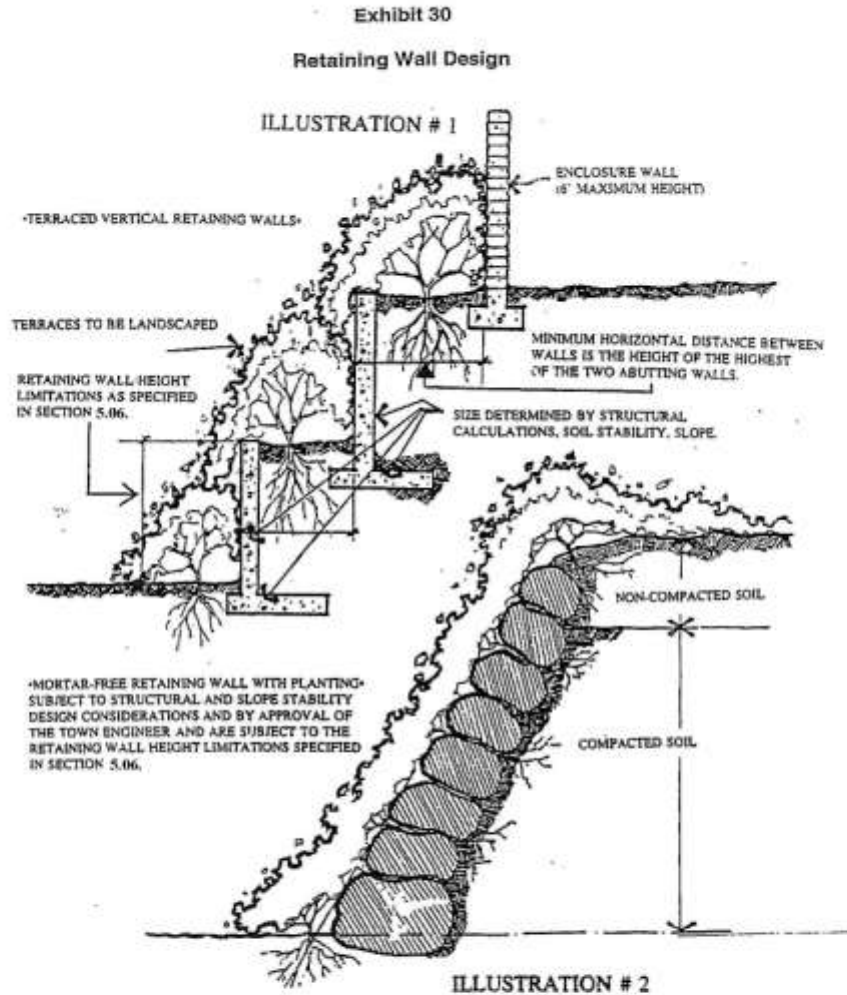
Fountain Hills Subdivision Ordinance
ARTICLE 5

- E. Height of Structures at Graded Sites:** The height of all structures shall not exceed the maximum height regulations of the zoning district in which the property is located. The height of a structure shall be measured vertically at any point along that cross section from the finished grade as shown on the approved subdivision grading plans. If there was no grading on the lot or parcel as a result of subdivision improvements, the finished grade shall be the lower elevation as of September 20, 1991 or as shown on the individual grading plans. Grade elevation does not include isolated topographical features, such as pits, hills, rock outcroppings, etc. that are less than 500 square feet in size.

Section 5.07 Walls and Fences

- A. Non-Retained Walls.** Non-retaining walls and fences shall not exceed six feet in height as measured from subdivision-finished grade.
- B. Perimeter Subdivision Walls.**
- 1. Reflect Topography:** Perimeter subdivision walls, if desired, shall be designed to reflect changes in the topography (See Exhibit 31).
 - 2. Design Preferences:** Perimeter subdivision walls, if desired, are encouraged to be designed and constructed in a height and style which preserves desert vistas and environment, unless otherwise approved by the Town (See Exhibit 31).
 - 3. Setback Requirements:** Perimeter subdivision walls over 3.5 feet in height that are located outside of a front-yard setback area shall observe the same setback from any public or private right-of-way property line as the street-side yard setback of the zoning district within which the subdivision is located.
- C.** Walls or fences on individual lots which are visible from the street are encouraged to be designed to match the character and appearance of the buildings in the subdivision (See Exhibit 31).

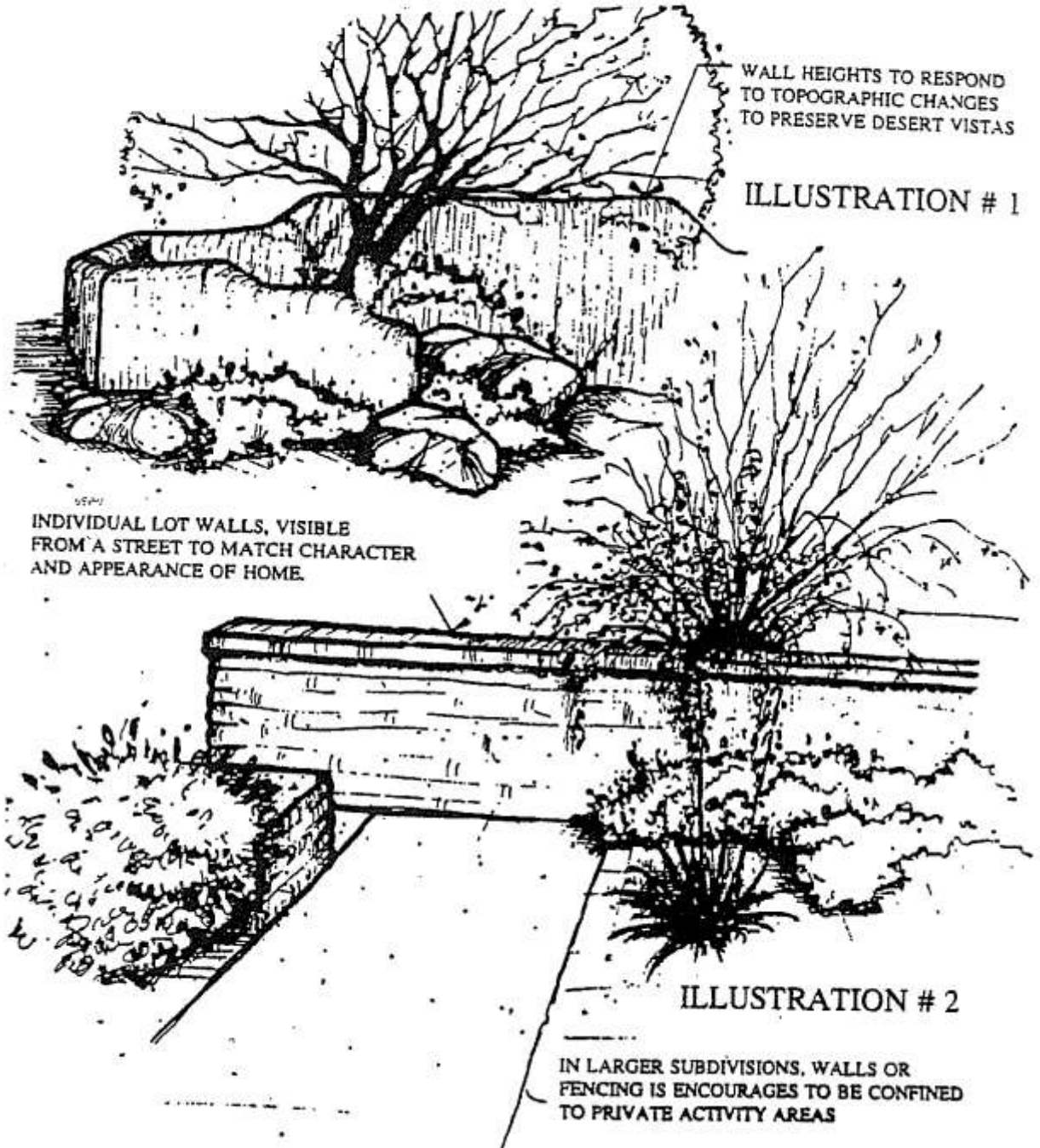
Fountain Hills Subdivision Ordinance
ARTICLE 5



Fountain Hills Subdivision Ordinance
ARTICLE 5

Exhibit 31

SUBDIVISION PERIMETER WALLS



Fountain Hills Subdivision Ordinance
ARTICLE 5

Section 5.08 Local Streets.

In an area with slopes greater than 15%, hillside local street standards may be utilized to encourage better adjustment to the topography of the area. See Exhibit 4 of this Ordinance and Article III, Section 3.05 of this Ordinance for more regulations on the use of hillside local roads. Existing significant topographical features, such as washes, hillsides, boulders and rock outcroppings, and established stands of native vegetation which cannot be re-vegetated, may warrant the approval of alternative engineering designs. Modifications would be considered on an individual basis, with approval by the Town Council. The following are requirements and design alternatives for street construction in the hillside areas.

- A. Grading Disturbance.** Grading for the construction of public streets or private streets are subject to the cut and fill and land disturbance limitations of this ordinance, and shall be developed as prescribed by the Town Engineer, the International Building Code, and the Department. Furthermore, disturbance as a result of road grading shall reduce the subdivision-wide allowance for hillside disturbance, as prescribed in this Ordinance. Disturbance outside of street rights-of-way or private road street tracts meeting public street right-of-way standards as a result of road grading shall reduce the subdivision-wide allowance for hillside disturbance, as prescribed in this Ordinance. Any subdivision contained within an Area Specific Plan adopted prior September 19, 1996 shall be exempted from this Subsection.
- B. Revegetation.** Where scarring occurs as a result of street or utility construction, re-vegetation and restoration shall be required of the subdivider. Restored areas shall be graded and landscaped to blend with the natural vegetation and terrain, and stabilized to control erosion. Landscaping and stabilization shall occur concurrently with construction (See Article VI, Section 6.05 of this Ordinance).
- C. Retaining Walls.** Grade changes that require retaining walls may be used only with the approval of the Town Council. Where approved for use, vertical retaining walls shall be in conformance with Sections 5.06 and 5.07 of this Article. For grade changes of more than eight feet, the use of multiple walls in a series of terraces is required. If two retaining walls are separated by a landscaped terrace of a width at least the height of the taller of the adjacent walls, then each wall shall be considered as a separate retaining wall. The finished surfaces of retaining walls are encouraged to blend into the natural setting by such means as texturing and the use of earth tone coloring. The use of native stone as a veneer is also possible (See Exhibit 30).

Fountain Hills Subdivision Ordinance
ARTICLE 5

For slopes of 50 degrees and less, mortar free stone retaining walls using irregularly shaped native boulders may be used, subject to structural and slope stability design considerations. Landscaping of the slope shall be provided to produce a more natural appearance (See Exhibit 30).

- D. **Balanced Excavation.**** Subject to Subsection 5.03.B of this Article, all excess excavated material shall be removed or incorporated as an integral part of the site development so that a natural look is maintained.
- E. **Drainage.**** Where drainage ways cross streets, culverts shall be installed to convey ten year frequency storm flows under the pavement, with higher volume storm flows being allowed to flow over the pavement in dip sections (See Exhibits 28 and 29). For washes with low flows, deletion of the culvert may be permitted where a concrete dip section is provided, when approved by the Town Engineer.

Section 5.09 On-Site Street Name Signs (Public Streets)

- A.** Street name signs and posts shall be standard (green reflectorized signs with white reflectorized lettering and a steel pole) unless the applicant receives approval of a Comprehensive Sign Plan by the Town Council.
- B.** Any approval of a Comprehensive Sign Plan proposing non-standard street sign materials shall be conditional upon the development's homeowner's association assuming responsibility for the installation, future maintenance and liability relating to the signs.
- C.** Non-standard street name signs, which are installed and maintained by a homeowner's association, shall have reflective letters and background.